

CLAIMS

1. (PREVIOUSLY PRESENTED) Apparatus for processing image data comprising processing means, input means and display means, wherein said image data is defined by a plurality of data processing nodes arranged in a hierarchical structure and said processing means is configured to perform the steps of:

generating a first image frame of a clip of image frames, wherein a plurality of image components makes up the first image frame, by means of processing said plurality of data processing nodes;

outputting said first image frame to said display means;

receiving, via said input means, first user input data indicating one of said plurality of image components;

in response to said receiving, automatically selecting a first data processing node considered to be appropriate to said indicated image component; and

displaying editing tools relevant to said first data processing node.

2. (PREVIOUSLY PRESENTED) Apparatus according to claim 1, wherein said first data processing node is in a sub-structure of said hierarchical structure that defines said image component.

3. (PREVIOUSLY PRESENTED) Apparatus according to claim 2, wherein said sub-structure is a layer, wherein a layer is defined as a connected collection of nodes having at the top a node that has the same parent node as at least one other node.

4. (PREVIOUSLY PRESENTED) Apparatus according to claim 3, wherein said processing means selects said first data processing node by performing the following steps:

identifying one of the plurality of data processing nodes that defines said image component;

defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of children nodes;

identifying the layer that includes said identified data processing node; and

selecting the top node of said identified layer.

5. (PREVIOUSLY PRESENTED) Apparatus according to claim 3, wherein said processing means selects said first data processing node by performing the following steps:
identifying one of the plurality of data processing nodes that defines said image component;
defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of children nodes;
identifying the layer that includes said identified data processing node; and
selecting a bottom node of said identified layer.

6. (PREVIOUSLY PRESENTED) Apparatus according to claim 3, wherein said processing means selects said first data processing node by performing the following steps:
identifying one of the plurality of data processing nodes that defines said image component;
selecting the closest node above said identified node that has the same parent node as at least one other node.

7. (PREVIOUSLY PRESENTED) Apparatus according to claim 1, wherein in response to first further user input data said processing means performs the following steps:
selecting a portion of said hierarchical structure that is considered appropriate to said selected image component and contains said first data processing node;
generating third image data comprising a depiction of said portion; and
outputting said third image data to said display means.

8. (PREVIOUSLY PRESENTED) Apparatus according to claim 7, wherein said third image data further includes a display of parameters relating to said first data processing node.

9. (PREVIOUSLY PRESENTED) Apparatus according to claim 7, wherein said portion of said hierarchical structure is a layer, wherein a layer is defined as a connected collection of nodes having at the top a node that has the same parent node as at least one other node.

10. (PREVIOUSLY PRESENTED) Apparatus according to claim 1, wherein in response to second further user input data indicating navigation through said hierarchical structure said processing means performs the following steps:

- selecting a second data processing node;
- generating a fourth image frame comprising said plurality of image components and tools relevant to said second data processing node; and
- outputting said fourth image frame to said display means.

11. (PREVIOUSLY PRESENTED) Apparatus according to claim 10, wherein said second data processing node is connected in said hierarchical structure to said first data processing node if said further user input data indicates vertical navigation.

12. (PREVIOUSLY PRESENTED) Apparatus according to claim 10, wherein said second data processing node has the same parent node as said first data processing node if said further user input data indicates horizontal navigation.

13. (PREVIOUSLY PRESENTED) Apparatus according to claim 10, wherein said second data processing node is of a comparable data type to said first data processing node but defines a different one of said plurality of image components from said indicated image component if said further user input data indicates horizontal navigation.

14. (PREVIOUSLY PRESENTED) A method of processing image data, wherein:
an image frame of a clip of image frames, wherein a plurality of image components makes up the image frame, and wherein said image frame is generated by processing a plurality of data processing nodes arranged in a hierarchical structure;
said image frame is displayed to a user;
said user manually selects one of said plurality of image components for adjusting;
in response to said selecting, a first data processing node considered to be appropriate to said image component is automatically selected; and
editing tools relevant to said first data processing node are displayed to said user.

15. (PREVIOUSLY PRESENTED) A method according to claim 14, wherein said first data processing node is in a sub-structure of said hierarchical structure that defines said image component.

16. (PREVIOUSLY PRESENTED) A method according to claim 15, wherein said sub-structure is a layer, wherein a layer is defined as a connected collection of nodes having at the top a node that has the same parent node as at least one other node.

17. (PREVIOUSLY PRESENTED) A method according to claim 16, wherein said step of selecting said first data processing node comprises the following steps of:
identifying one of the plurality of data processing nodes that defines said image component;
defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of children nodes;
identifying the layer that includes said identified data processing node; and
selecting the top node of said identified layer.

18. (PREVIOUSLY PRESENTED) A method according to claim 16, wherein said step of selecting said first data processing node comprises the following steps:
identifying one of the of data processing nodes that defines said image component;
defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of children nodes;
identifying the layer that includes said identified data processing node; and
selecting a bottom node of said identified layer.

19. (PREVIOUSLY PRESENTED) A method according to claim 14, wherein said step of selecting said first data processing node comprises the following steps:
identifying one of the plurality of data processing nodes that defines said image component;
selecting the closest node above said identified node that has the same parent node as at least one other node.

20. (PREVIOUSLY PRESENTED) A method according to claim **14**, wherein in response to further manual input a portion of said hierarchical structure that is considered appropriate to said selected image component and contains said first data processing node is displayed to said user.

21. (PREVIOUSLY PRESENTED) A method according to claim **20**, wherein a display of parameters relating to said first data processing node is additionally displayed to said user.

22. (PREVIOUSLY PRESENTED) A method according to claim **20**, wherein said portion of said hierarchical structure is a layer, wherein a layer is defined as a connected collection of nodes having at the top a node that has the same parent node as at least one other node. .

23. (PREVIOUSLY PRESENTED) A method according to claim **14**, wherein said user manually selects a direction for navigation through said hierarchical structure; a second data processing node is selected in response to said direction; and editing tools relevant to said first data processing node are displayed to said user.

24. (PREVIOUSLY PRESENTED) A method according to claim **23**, wherein if said direction for navigation is vertical then said second data processing node is connected in said hierarchical structure to said first data processing node.

25. (PREVIOUSLY PRESENTED) Apparatus according to claim **23**, wherein if said direction for navigation is horizontal then second data processing node is of a comparable data type to said first data processing node but defines, a different one of said plurality of image components from said indicated image component.

26. (PREVIOUSLY PRESENTED) A method according to claim **23**, wherein if said direction for navigation is horizontal then said second data processing node has the same parent node as said first data processing node.

27. (PREVIOUSLY PRESENTED) In a computer system having a graphical user interface including a display and a user interface selection device, a method of processing image data, wherein

an image frame of a clip of image frames, wherein a plurality of image components makes up the image frame, and wherein the image frame is generated by processing a plurality of data processing nodes arranged in a hierarchical structure;

said image frame is displayed to a user by means of said display;

said system responds to manual operation of said user interface selection device when said user manually selects one of said plurality of image components for adjusting;

in response to said manual selection, said system automatically identifies a first data processing node considered to be appropriate to the image component that has been selected; and

said system updates said graphical user interface to present editing tools relevant to said first data processing node.

28. (PREVIOUSLY PRESENTED) A method according to claim **27**, wherein said step of selecting said first data processing node comprises the steps of

identifying one of the plurality of data processing nodes that define said image component;

defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of subordinate nodes;

identifying the layer that includes said identified data processing node; and

selecting the top node of said identified layer.

29. (PREVIOUSLY PRESENTED) A method according to claim **27**, wherein said user manually selects a direction for navigation through said hierarchical structure using said user interface selection device;

a second data processing node is selected in response to said editing tools relevant to said first data processing nodes are displayed to said user via said graphical user interface.

30. (PREVIOUSLY PRESENTED) A method according to claim **29**, wherein movement of said interface selection device in a first direction results in the second data processing node being connected in said hierarchical structure to said first processing node, and movement in an alternative direction results in said second data processing node being selected that is of a comparable data type to said first data processing node but defines a different one of said plurality of image components.

31. (PREVIOUSLY PRESENTED) A computer-readable medium comprising a computer program storage device storing instructions that when read and executed by a computer, results in the computer performing a method for processing image data, the method comprising:

- generating an image frame of a clip of image frames, wherein a plurality of image components makes up the image frame, by processing a plurality of data processing nodes arranged in a hierarchical structure;
- displaying said image frame to a user;
- responding to a user's manual selection of one of said plurality of image components for adjustment;
- in response to said selection, automatically identifying a first data processing node considered to be appropriate to said image component that has been selected; and
- presenting editing tools relevant to said first data processing node to said user.

32. (PREVIOUSLY PRESENTED) A computer-readable medium having computer-readable instructions according to claim **31**, such that when executing said instructions a computer will also perform the steps of:

- identifying one of the plurality of data processing nodes that define said image component;
- defining a plurality of layers within said hierarchical structure by identifying nodes with a plurality of subordinate nodes;
- identifying a layer that includes said identified data processing node; and
- selecting the top node of said identified layer.